

# TOMPKINS COUNTY CIVIL SERVICE EXAMINATION

Inclusion Through Diversity



## OPEN TO THE PUBLIC

Tompkins County Department of Human Resources Office  
125 E. Court Street  
Ithaca, NY 14850  
(607) 274-5526

Tompkins County is an Equal Opportunity/Affirmative Action employer. Minorities and women are encouraged to apply

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**TITLE:** Civil Engineer - Tompkins County

**EXAM NO:** 61508

**SALARY:** \$26.06 per hour - 2017 Hire Rate

**EXAM DATE:** 03/03/18

**ISSUE DATE:** 01/10/18

**THE FINAL DATE TO FILE APPLICATIONS:** 01/25/18

**DATE THAT THIS ANNOUNCEMENT SHOULD BE REMOVED FROM POSTING:** 03/04/18

**RESIDENCY WAIVED**

**THE USE OF A QUIET HAND-HELD CALCULATOR WILL BE ALLOWED FOR THIS EXAMINATION.**

**LOCATION OF POSITIONS/VACANCIES:**

There is currently one vacancy in the title of Civil Engineer located at the Tompkins County Highway Department. The eligible list resulting from this examination may be used to fill any full-time, part-time or temporary vacancy that may occur during the life of the eligible list.

**MINIMUM QUALIFICATIONS:** No later than the final filing date posted, the candidate must meet the following:

- (a) Graduation from a regionally accredited or New York State approved four-year college or university, with a Bachelor's Degree in Civil Engineering, **AND** at least two years of experience specifically in the area of road construction; **OR**
- (b) Graduation from a regionally accredited or New York State approved two-year college, with an Associate's Degree in Engineering Technology, Engineering Science, or a related field **AND** at least five years of experience specifically in the area of road construction; **OR**
- (c) Any combination of training and experience equal to or greater than that described in (a) or (b) above.

**SPECIAL REQUIREMENT:**

The applicant must be eligible for a New York State motor vehicle operator's license at the time of application, possess such license at the time of appointment and maintain a valid driver's license for the duration of employment.

**DISTINGUISHING FEATURES OF THE CLASS:**

An employee in this position is responsible for managing the Road Reconstruction activities and functions of the Highway Department. Typical duties will be program planning, project scheduling, project design, field engineering and survey, insuring

cost effective and efficient productivity of labor and equipment resources, quality control, report writing, and record keeping, enforcement of applicable County, State, and Federal rules and regulations (OSHA, PESH, MS4 Phase II Storm Water Runoff Regulations). The work involves exposure to all kinds of weather conditions. The work is performed under the general supervision of the Highway Manager, with a high degree of autonomy. The incumbent will perform all related duties as required.

**TYPICAL WORK ACTIVITIES: (Illustrative Only)**

- Develops master plans and gantt charts for program management;
- Monitors and manages the highway materials account to keep expenditures within budget;
- Develops project designs and specifications;
- Produces Work and Service Orders;
- Uses and maintains a sophisticated software package for pavement management;
- Attends job related training and seminars as determined by the Highway Manager;
- Performs field surveys and inspections;
- Visits Work Order and Service Order project sites before, during, and after the project to design and manage various phases of the project;
- Provides instruction for Senior Crew Supervisor and Contractors, in the activities and tasks to be performed and answers questions concerning work and service orders;
- Observes work in progress and insures the work is progressing according to schedule and in accordance with all quality control and safety standards;
- Inspects work to be sure work complies with plans, specifications, and best practices;
- Troubleshoots work site construction problems to implement any necessary field changes;
- Enforces and insures compliance with all work site safety policies, rules and regulations published by the County and outside agencies such as OSHA, DEC, PESH, etc.;
- Applies analytical skills to devise more efficient construction processes and insures the most efficient use of labor, materials, and equipment;
- Maintains written records of work performed and materials and labor used;
- Project cost estimating;
- Applies analytical skills to constantly improve efficiencies for record keeping and other office work; and
- Uses computer programs, such as (but not limited to) EXCEL, MS WORD, or CADD as tools for design, planning and record keeping.

**KNOWLEDGE, SKILLS, ABILITIES AND PERSONAL CHARACTERISTICS:**

- Good knowledge of methods, materials, tools and terminology used in the construction of bridges, roads, and adjacent areas;
- Good knowledge of geometric and structural road design methods and practices;
- Good working knowledge of NYSDOT Standard Specifications;
- Compendious knowledge of aggregates, asphalt emulsion products, cold mix asphalt concrete, and hot mix asphalt concrete;
- Good knowledge of safety precautions (including local safety and traffic standards) used in highway and bridge construction and maintenance;
- Ability to distinguish/recognize when construction materials appear to be out of specification;
- Ability to perform basic land surveying tasks such as shoot elevations, turn angles, locate reference points, establish grade lines etc.;
- Ability to do basic Computer Aided Design and drawings;
- Ability to use programs such as EXCELL and Word Processing;
- Ability to read and interpret plans and specifications, policies, rules and regulations;
- Ability to interact constructively and positively in daily assignments;
- Ability to communicate clearly both orally and in writing;
- Ability to write technical reports and records;
- Ability to analyze, troubleshoot, and devise more efficient practices and methods;
- Ability to develop workers skills and promote training and development;
- Ability to enforce rules and regulations;
- Ability to make arithmetic computations involving counting, addition, subtraction, division, multiplication, fractions, and basic algebra and geometry;
- Ability to interact with other county department staff in providing or assisting in requested services;
- Willingness to work in adverse weather;
- Willingness to respond to emergencies and work overtime;
- Dependability, initiative, resourcefulness, tact and good judgement are required; and

- The employee's physical and mental condition shall be commensurate with the demands of the position, either with or without reasonable accommodations.

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**Complete Scope of the examination and Expanded subtest descriptions:**

1. Principles and knowledge related to computer-assisted design and drafting (CADD) technology

These questions test for knowledge of the basic concepts, terminology and proper procedures to use when creating technical drawings utilizing computerized design and drafting software.

2. Principles and practices of civil engineering

These questions test for knowledge of engineering concepts and their practical applications to the construction, operation and maintenance of public works projects, including roadways, bridges, buildings, water and sewage systems and similar types of infrastructure.

3. Engineering plans, specifications and estimates

These questions test for knowledge of and the ability to read and interpret construction drawings and technical specifications, and for the ability to calculate cost and quantity estimates from technical presentations and/or engineering and construction drawings. Knowledge of estimating techniques and the proper method of construction for specified projects will be required.

4. Methods and materials of construction

These questions test for knowledge of the proper procedures and materials used in the construction, maintenance and repair of various types of public works projects, including such typical construction work as excavations, roadways, embankments, and building and related structural improvements.

5. Surveying principles and practices, including map interpretation

These questions test for knowledge of the concepts, computations and proper procedures involved in performing surveys for construction projects and land areas; including the use of theodolites, total stations, automatic levels and other contemporary field survey equipment; and for the ability to read, analyze and perform technical computations based on site plans and topographic and survey maps.

6. Construction and maintenance of highways, bridges, drainage systems and other related structures

These questions test for knowledge of the engineering concepts, practices, testing procedures, materials and computations used in the installation, repair and upkeep of roadways, overpasses, abutments, retaining walls, embankments, drainage structures and related appurtenances.

7. Preparing written material

These questions test for the ability to present information clearly and accurately, and to organize paragraphs logically and comprehensibly. For some questions, you will be given information in two or three sentences followed by four restatements of the information. You must then choose the best version. For other questions, you will be given paragraphs with their sentences out of order. You must then choose, from four suggestions, the best order for the sentences.

The New York State Department of Civil Service has not prepared a test guide for this examination. However, candidates may find information in the publication "How to take a written test" helpful in preparing for this test. This publication is available online at: [www.cs.ny.gov/testing/localtestguides.cfm](http://www.cs.ny.gov/testing/localtestguides.cfm)

## FURTHER INFORMATION AND INSTRUCTIONS

Falsification of any part of the "Application for Employment" will result in disqualification.

Accepted candidates will be notified when and where to appear for the examination. If you do not receive your notice to appear at least three days before the date of the written examination, call Tompkins County Department of Human Resources at 274-5526. If an application is disapproved, due notice will be sent. This department does not make formal acknowledgment of the receipt of an application or take responsibility for non-delivery or postal delay.

Applicants must answer every question on the application form and make sure that the application is complete in all respects. Incomplete applications will be disapproved.

**ACTIVE MILITARY PERSONNEL, VETERANS OR DISABLED VETERANS** desiring to claim additional credit will request the Veterans Credits application form, at any time between the date of application for examination(s) and the date of the establishment of the resulting eligible list. You must meet the requirements set by NYS for these credits and they may be used only once. **YOU MAY NOT CLAIM ADDITIONAL CREDITS AFTER THE ELIGIBLE LIST HAS BEEN ESTABLISHED. IT IS THE CANDIDATE'S RESPONSIBILITY TO REQUEST THE VETERANS CREDIT APPLICATION FORMS AND TO SUBMIT THESE FORMS AND ANY SUPPORTING PAPERWORK BEFORE THE ELIGIBLE LIST IS ESTABLISHED.**

Tompkins County's written examinations are prepared and rated by the New York State Department of Civil Service in accordance with Section 23-2 of Civil Service Law. The provisions of the New York State Civil Service Rules and Regulations, which deal with the rating and review of the examinations apply.

The duration of the eligible lists may be fixed for a minimum of one and a maximum of four years and may be extended beyond four years if there has been a restriction against the filling of vacancies in that title.

The candidates must complete a separate "Application for Employment" for each open-competitive and/or promotional examination that the candidate is eligible to take.

All experience required meeting the acceptable training and experience is full-time experience. (Part-time experience will be credited on a prorated basis).

Appointment from an eligible list must be made from the top three candidates willing to accept the appointment.

Tompkins County is an Equal Opportunity Employer. As part of its efforts to provide employment opportunities to the physically handicapped, Tompkins County Civil Service has adopted a rule permitting the employment of qualified physically handicapped persons without competitive examination (pursuant to Section 55 of Civil Service Law). If you meet the minimum qualifications for this position and wish to know more about this rule, please contact the Tompkins County Department of Human Resources Office.

Unless otherwise notified, candidates are permitted to use quiet, hand-held, and solar or battery powered calculators. Devices with Typewriter Keyboards, Spell Checkers, Personal Digital Assistants, Address Books, Language Translators, Dictionaries or any similar devices are prohibited. You may not bring books or other reference materials.

**CROSS-FILING - APPLYING FOR CIVIL SERVICE EXAMINATIONS IN MULTIPLE JURISDICTIONS WHEN EXAMINATIONS ARE SCHEDULED ON THE SAME DATE:** When applying for examinations across multiple jurisdictions - all of which are scheduled on the same day - you must submit a Tompkins County Cross-Filing Form. This form must be submitted no later than 4:30 PM on the final filing date of the examination. On this form, list each examination that you are taking and then tell us where you would like to sit. The purpose is to ensure that all of the test materials for the various examinations that you are taking will be available in one location. If you do not provide the cross-filing form to us by the final filing date, we cannot ensure that we can accommodate your desire to cross-file. If any of the examinations are State level examinations, you must sit at the State test center. You will still need to complete the Tompkins County cross-filing form. If sitting at the State site, the State will notify you of when and where to report for your examination(s) and you should bring all admittance letters to the State site. If you are not taking a State examination, bring all admittance letters to your chosen testing site. If you have any question please call Tompkins County Department of Human Resources Department (607) 274-5526. The Cross File form is located at <http://www.tompkins-co.org/personnel/CivilSrvForms/index.html>

**FOR RELIGIOUS ACCOMMODATION AND HANDICAPPED PERSONS:** If special arrangements for testing are required, please indicate this on your application.

**ALL CANDIDATES FOR EMPLOYMENT FOR POSITIONS IN SCHOOL DISTRICTS AND BOCES GOVERNED BY TOMPKINS COUNTY CIVIL SERVICE MAY HAVE THE FOLLOWING SPECIAL REQUIREMENT. PER CHAPTER 180 OF THE LAWS OF 2000, AND BY REGULATIONS OF THE COMMISSIONER OF EDUCATION, TO BE EMPLOYED IN A POSITION DESIGNATED BY A SCHOOL DISTRICT OR BOCES AS INVOLVING DIRECT CONTACT WITH STUDENTS, A CLEARANCE FOR EMPLOYMENT FROM THE STATE EDUCATION DEPARTMENT IS REQUIRED.**

In conformance with Section 85-a of the Civil Service Law, children of firefighters and police officers killed in the line of duties shall be entitled to receive an additional ten points in a competitive examination for original appointment in the same municipality in which his or her parent has served. If you are qualified to participate in this examination and are a child of firefighter or police officer killed in the line of duties in this municipality, please inform this office of this matter when you submit your application for examination. A candidate claiming such credit has a minimum of two months from the application deadline to provide the necessary documentation to verify additional credit eligibility. However, no credit may be added after the eligible list has been established.

**BACKGROUND INVESTIGATION:** Applicants may be required to undergo a State and national criminal history background investigation, which will include a fingerprint check, to determine suitability for appointment. Failure to meet the standards for the background investigation may result in disqualification.

TOMPKINS COUNTY PERSONNEL DEPARTMENT, 125 EAST COURT STREET, ITHACA, NY 14850